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## Work Values in European Comparison: School Education and Work Orientation in Nine Countries

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### *Abstract*

The present contribution analyses *work values* in nine European countries using data from the ISSP study (International Social Survey Programme) conducted in 1989. The fundamental question deals with the influence school education and employment activity have on the evaluation of work attributes at the professional level. This has been achieved by applying a method in which school education in each country is divided into three ordinal categories, producing a standardisation for the nine countries. The resulting groups can then be clearly defined according to the importance awarded to various work values. Similarities between these hierarchies of preference are examined using cluster analysis for ordinal data. An interpretation of the clusters points to a clear determination of work values through the effects of education. Persons with higher education attribute disproportionately more importance to intrinsic values (interesting job, work independently) than is the case for the other levels of education. Those questioned that had low or middle levels of education considered both intrinsic and extrinsic values (job security, high income) important - and showed a distinct tendency to prefer extrinsic characteristics. There are also recognisable national effects that can be said to have less to do with economic parameters than with cultural affiliations such as, for example, a common language. The analyses, which were conducted separately in working and non-working groups, do not provide any clear conclusions about the influence employment activity has on work values.

### 1 Introduction

In today's world, the efficiency of a country's economic system represents the most important standard of assessment and comparison for societies. The scope and quality of the education system are certainly determining factors for a country's level of economic development. In addition to providing general and specific qualifications, the education system assumes an important role in passing on values and norms. Value orientation is reflected on the one hand in a subjective evaluation of the relative importance of various aspects of life (leisure time, work, politics, religion etc.), on the other hand in specific orientation towards, for example, the importance of political or work-related values. The latter items are presently gaining in importance, especially if one considers that technological and economic progress

alone are not sufficient to meet future demands. People and their needs and demands in their private and particularly in their professional sphere are increasingly being taken into consideration. This paper undertakes an examination of the work orientation of people in nine European countries using data from the ISSP study (International Social Survey Programme) *work orientations*<sup>1</sup> conducted in 1989. From the perspective of international comparative education research it is of interest to discover to what degree variations in work values can be explained by differences in the level of education.

## 2 Theoretical frame of reference and formulation of the question

According to Pawlowsky (1986), attitudes towards employment activity can be divided into two general areas: „*the aspect of value in work*“ and „*attitudes towards work activity*“. The aspect of value in work mainly deals with social norms and recognised patterns of evaluation towards work. It should be understood as the „internalised form of social appraisal and assessment of work“ (Pawlowsky 1986: 32). Attitudes towards work activity can be categorised into three attributes (Pawlowsky 1986): *Work demands*, *assessment of the job activity* and *job satisfaction*. Work related demands appear in literature on the subject as *work values*. These can be readily characterised as relatively time-resistant and comprehensive interpretation patterns regarding work per se. As a result, they hold a special position in the cognitive perception framework of an individual. Compared to temporary job attitudes, they demonstrate high levels of stability and assume the role of thoughts and considerations that produce action when making career plans and crucial decisions. This is precisely what makes a closer examination of structure and preferences of work values interesting. This is also reflected in the relevant literature (i.e. Borg & Galinat 1986, Borg, Braun & Häder 1993, Elizur 1984, Elizur, Borg, Hunt & Magyari-Beck 1991, Haller & Heschl 1993, Pawlowsky 1986, Plaikner & Tarnai 1980).

Various authors have presented theoretical drafts of work value structures. Zy-towski (1979) and Centers & Bugental (1966) subsume professional attributes into two complexes: the *extrinsic* and the *intrinsic attitude towards work*. The term *extrinsic* attitude towards work means that an activity is observed from an instrumental point of view. Expectations of work are in direct relation to the effects of employment (high income, advancement). The term *intrinsic work values* denotes opportunities for further development of personal skills and an interest in the work promoted by the activity etc. Rosenberg (1957) distinguishes a further construct termed *social oriented, people oriented value complex* and categorises work values using three components. The social oriented value complex represents the need for contact with others and activities benefiting society. Classifications of work values structurally similar to Rosenberg's have been produced by, among others, Alderfer (1972), Elizur (1984) and Pawlowsky (1986). Alderfer (1972) introduces the three needs *existence*, *growth* and *relatedness*, whereas Elizur distinguishes *material or instrumental, cognitive* and *affective work values*. Pawlowsky (1986) differentiates between *acquisitive, non-acquisitive* and *social oriented dimensions* on the basis of results using Multidimensional Scaling (MDS). The concepts developed by Rosenberg, Alderfer, Elizur and Pawlowsky differ more in semantics and less in structure (Table 1).

Table 1: Overview of theoretical conceptions on the structure of work values.

Authors	Theoretical Conceptions		
Alderfer	existence	growth	relatedness
Elizur	material or instrumental	cognitive	affective
Pawlowsky	acquisitive	non-acquisitive	social
Rosenberg	extrinsic	intrinsic	social

Prevailing research in the field of work values is preoccupied primarily with the structure of one of these theoretical approaches. In all these papers, work values are instated by the assessment of the importance of attributes of employment activity.

Studies undertaking international comparisons have not been able to determine differences in the structure of work values to the same degree as in the level of their assessed importance (cf. Borg et al. 1993, Elizur et al. 1991). These differences could be attributed to individual aspects (e.g. life cycle and education variables) and contextual aspects (e.g. the historical, cultural and economic development of a country or region). In 1989 an international study on *work orientations* was conducted in eleven countries within the framework of the „International Social Survey Programme“. The study featured questionnaires on the value aspects of work and on job attitudes.

Haller & Heschl (1993) analysed, among other things, the data on work values gathered in this study. They investigated three research hypotheses with regard to the change in work values in advanced societies: the question of post-materialistic work values taking over materialistic work values, the question of the increasing instrumentalisation of employment activity and the question of hedonistic work orientation replacing the classic Protestant Ethics. Based on the responses of all those questioned, they come to the conclusion that „*hardly any indications of general trends of professional value orientation can be determined*“. Employees in advanced nations attach great importance to both the instrumental and intrinsic values of a job; job security and appropriate income are valued as highly as performing an interesting, self-determined and social activity. That indicates that the possibility of a polarisation of work orientation (duty and achievement values versus hedonistic values as well as materialistic versus post-materialistic values) is excluded.“ (Haller & Heschl 1993: 298). Country specific differences arise in the attitude towards intrinsic, social orientation (useful to society, help other people) and extrinsic, hedonistic orientation (a lot of leisure time, flexible working hours). A noticeable cultural effect is most obvious in the extrinsic, hedonistic orientation, „here, all Anglo-Saxon and Northern and Western European countries show low values and all German speaking nations, Italy, Hungary and Israel, high values“ (Haller & Heschl 1993: 298). These statements are made with reference to all those questioned without distinguishing between working and non-working respondents.

The analyses of this contribution are based on the same work value data with the exclusion of the two non-European countries Israel and the United States. The main points of focus are as follows:

An investigation as to what extent the *school education* of those interviewed influences their work values is the main object, whereby special conditions in each of

the countries must be considered. School education represents an attribute which can serve to describe both individuals and collective groups. Individuals in a given country differ in the quality of their academic certificates and countries provide education systems with varying degrees of differentiation.

Some German authors have emphasised school education as a determinant of values. In an investigation on social values, Maag (1991) demonstrates that the less educated have a higher materialistic orientation than is the case with the more educated. They regard extrinsic work values such as *job security* and *high income* as more important. According to Fend, Knörzer, Nage, Specht & Vöth-Szusdziara (1976), this can be attributed to the fact that certain values are accentuated differently by Volks- und Hauptschulen (Junior High Schools) and Gymnasien (College Preparatory Schools). Volks- und Hauptschulen (Junior High Schools) stress a conformist education, whereby Gymnasien (College Preparatory Schools) emphasise self-development.

Klages (1984), in his study on change in values, found that the two characteristics age and education, two overlapping characteristics, determine to a high degree whether an individual develops more duty or acceptance oriented values or whether self-development predominates. Possessing both of these characteristics in no way determines „which values an individual will possess in the course of his entire life. It can be pointed out, that in connection with the shift of values and because of new conditions existing young people with a high level of education exhibit the change in values much more pronounced and in greater numbers than those of comparable age with a lower level of education or with a comparable level of education but greater age“ (Klages 1984: 42).

One of the goals of this contribution is to answer the question as to what degree the effects of education also determine attitudes towards work values in other countries and to what extent the stated findings can be generally applied.

Secondly, the problem of the extent *the employment of the interviewed person at the time of the questioning* modifies work orientation will be investigated. The employment of an individual is a global indicator for the influence of situational factors on work values. This can be said with respect to such aspects as job satisfaction, job position and job socialisation.

### 3 The sample

The data basis of the present analyses is the survey of „work orientations“ conducted in 1989 in eleven countries within the framework of the „International Social Survey Programme“ (ISSP). The present investigation considers the following nine European countries: Austria (A), The Federal Republic of Germany (as defined prior to reunification) (D), Great Britain (GB), Hungary (H), Italy (I), Ireland (IRL), Norway (N), Northern Ireland (NIRL), and The Netherlands (NL). 12,137 interviews were undertaken in these countries. The number of people interviewed in each country varies between 780 (Northern Ireland) and 1,997 (Austria). The interviews can be considered representative for each country.

The examination will begin with the group consisting of currently employed individuals since it is assumed that in addition to the education factor, the current level of employment experience also influences work values. Criterion for selection is the current practice of paid work of at least 10 hours a week. 6,083, or 50.1% of the total

12,137 interviewees met this criterion. 84 of those 6,083 were not considered due to omitted answers on their school education, resulting in a total of N=5,999 interviewees for analysis. In the following text, this subsample is referred to as the *working group*.

The sample of interviewees obtained as described above will be compared with the remaining participants belonging to a group designated *non-working group*. Of the 6,054 interviews a total of N=5,869 can be considered as valid cases. This part of the sample constitutes those who are not employed as defined above. For this reason, the judgement of the importance of work values made by these participants can be observed more as a general expression of values than an attitude formed by current employment. A comparison between these two samples should demonstrate the extent to which this assumption is correct.

According to Table 2, working people are generally younger and the proportion of men is higher. Only the interviewees in Norway display little variance in average age. In the non-working group the distribution of age is less symmetrical and more heterogeneous. This is indicated by the difference between means and medians and by higher standard deviations. This is a sign that the sample of the non-working group, in contrast to the working group, is more heterogeneous. To what extent the varying proportions in the non-working and working groups correspond to real differences in the individual countries or can be attributed to differences affected by the questionnaire cannot be verified in detail.

Table 2: Distribution of age and gender and the proportions in both samples.

Group	Age			Gender		Proportions	
	Mean	SD	Median	Male	Female	N	%
A-in paid job	36.31	12.39	36	58.1	41.9	869	44%
A-not in paid job	52.71	20.40	59	34.2	65.8	1105	56%
A-total	45.49	19.15	45	44.7	55.3	1974	
D-in paid job	38.49	11.88	37	59.0	41.0	642	43%
D-not in paid job	55.39	18.31	61	35.1	64.9	867	57%
D-total	48.20	17.96	48	45.3	54.7	1509	
GB-in paid job	39.59	11.65	40	55.4	44.6	717	56%
GB-not in paid job	53.39	19.62	59	34.9	65.1	567	44%
GB-total	45.67	17.10	44	46.3	53.7	1284	
H-in paid job	37.29	10.82	37	53.8	46.2	586	61%
H-not in paid job	55.26	17.38	60	32.5	67.5	379	39%
H-total	44.35	16.33	43	45.4	54.6	965	
I-in paid job	38.74	11.67	38	60.9	39.1	583	55%
I-not in paid job	47.53	18.18	52	30.1	69.9	445	45%
I-total	42.55	15.46	42	47.6	52.4	1028	
IRL-in paid job	38.08	13.39	37	64.6	35.4	477	49%
IRL-not in paid job	50.12	18.67	49	30.5	69.5	495	51%
IRL-total	44.19	17.36	42	47.2	52.8	972	
N-in paid job	39.67	12.56	39	55.1	44.9	1102	65%
N-not in paid job	43.08	21.00	40	43.2	56.8	585	35%
N-total	40.85	16.07	39	51.0	49.0	1687	
NIRL-in paid job	38.62	12.11	37	59.6	40.4	339	44%
NIRL-not in paid job	52.58	19.61	56	32.0	68.0	438	56%
NIRL-total	46.48	18.12	43	44.0	56.0	777	
NL-in paid job	35.85	10.82	34	67.1	32.9	684	41%
NL-not in paid job	46.02	19.16	44	30.6	69.4	988	59%
NL-total	41.86	17.02	39	45.5	54.5	1672	

Legend: A=Austria, D=Germany, GB=Great Britain, H=Hungary, I=Italy, IRL=Ireland, N=Norway, NIRL=Northern Ireland, NL=The Netherlands .

## 4 Data

### 4.1 Work values

The measurement of work values is derived from the interviewees' assessment of nine questions:

From the following list, please tick one box for each item to show how important you personally think it is in a job.

How important is....

V24 ... job security?

V25 ... high income?

V26 ... good opportunities for advancement?

V27 ... a job that leaves a lot of leisure time?

V28 ... an interesting job?

V29 ... a job that allows someone to work independently?

V30 ... a job that allows someone to help other people?

V31 ... a job that is useful to society?

V32 ... a job with flexible working hours?

Please tick one box on each line: 1=very important, 2=important, 3=neither important nor unimportant, 4=not important, 5=not important at all

The responses to the questions listed are employed as indicators for the theoretical constructs described above. The items V24 *job security*, V25 *high income* and V26 *advancement* are to be attributed to the extrinsic and instrumental work orientation construct. The intrinsic work orientation is represented by items V28 *interesting job* and V29 *work independently*. Socially oriented work values are covered by items V30 *help other people* and V31 *useful to society*. Item V27 *a lot of leisure time* has not proven to be a reliable indicator for one of these constructs (cf. Faulbaum 1983, Schmidt 1983). It is better regarded as an indicator for extrinsic orientation. There are no empirical results available for aspect V32 *flexible working hours* and its classification into one of the dimensions of work values. The degree to which the internal structure of work values is confirmed based on data of the ISSP study can be determined by using factor analysis.

Haller & Heschl (1993) determined three factors for all the ISSP study interviewees (14,157) in the 11 countries. At the same time they show that for the countries Italy, Ireland, Norway and The Netherlands four factors are more appropriate for the data provided. A factor analysis carried out on the basis of the nine European countries also suggests a four factor structure that exactly confirms the assignment of the items to the theoretical concepts described above. The fourth factor consists of the items V27 *a lot of leisure time* and V31 *flexible working hours*. Haller & Heschl (1993) call these *extrinsic-hedonistic orientation*. Separately conducted factor analyses produced the same structure of work values for both the non-working and the working group. The terms *extrinsic-instrumental orientation* (V24, V25 and V26), *intrinsic orientation* (V28 and V29), *social orientation* (V30 and V31) and *extrinsic-hedonistic orientation* (V27 and V32) are used in the ensuing description of the analysis results.



## 4.2 School education

A classification of education will be utilised which generates a three categorical education variable with low, middle and high level of school education for every country based on the academic certificate (V101). In those cases where the status of the certificate cannot be clearly defined, the average number of school years (V100) of the participants serves as an additional indicator for the classification into an education category. This classification does not bear the same weight in all the countries due to special circumstances in some of them. For this reason specific characteristics concerning the circumstances in the individual countries must be considered when interpreting the results.

## 5 Method

The aim of further analyses is to display similarities among the education groups in the nine countries with respect to the work values characteristic for each one. The interviewees are divided into 27 groups based on the combination of the two attributes nationality and education. For each of these groups the average ranking of the nine items is calculated and used to establish their order. In both steps of the aggregation the ordinal scale level of the basic data is required. In this way each group is described by a clear ranking of the nine items in the compilation of the work values. This approach is appropriate for making international comparisons because assumptions are not made about the uniform meaning of the various levels of answers and, in addition, problematic assumptions with respect to the scale level are thus not necessary.

The ranks of the nine work value items of each group serve as the basis for determining similarities among the 27 groups. A dissimilarity matrix is calculated using the „Canberra Metric“ (cf. Lance & Williams 1967), a distance function for ordinal characteristics that is both metric and scale invariant (Bacher 1994: 217):

Whereby  $d_{ij}$  denotes the distance between groups  $i$  and  $j$ ,  $x_{il}$  denotes the rank  $l$  of an

$$d_{ij} = \sum_{l=1}^m \frac{|x_{il} - x_{jl}|}{(x_{il} + x_{jl})}$$

item in group  $i$  and  $x_{jl}$  denotes the rank  $l$  in group  $j$ . Since the dissimilarities between 9 items are included in the distance function,  $m$  equals 9 in this instance. This function weighs the front ranks heavier than the differences between the back ranks. This corresponds with the assumption that convergence and deviation with the most important professional characteristics are more significant than with the less important characteristics. For each of the two groups, the calculation of the distance function produces a symmetrical 27\*27 dissimilarity matrix by means of which each country's education group is compared to the others in relation to the work values characterised.

The exploration of similarities and differences among the 27 groups that were formed as a result of education and nationality was conducted based on dissimilarity matrices using a hierarchical cluster analysis in accordance with the average linkage procedure (Anderberg 1973, Steinhausen & Langer 1977). The process of combining the indivi-

dual groups into clusters is reconstructed according to the status awarded to the items reflecting preferences for professional attributes. This was done in order to arrive at an appropriate number of clusters which are sufficiently homogeneous yet differ clearly enough from one another. A validation of these classifications was conducted using selected criterion variables important for the characterisation of the nations and the education groups. Here we are dealing with individual characteristics like age and gender and collective characteristics like the level of economic development of the individual countries.

## 6 Characterisation of the education groups

The division of the individual national samples according to education and the attributes characterising them are essential for the analysis of the preference hierarchies of the work values. A look at the proportions produced by those employed shows certain education groups disproportionately represented in some countries (Table 3). The most noticeable difference occurs between the lower education groups of Austria, Italy, and Norway: In Austria this group consists of 64% individuals with low education and only 15% and 16% respectively in Italy and Norway. These differences may arise to a certain extent as a result of difficulties in division and the attempt to standardise the characteristics of school education. In the non-working section the largest group is comprised of individuals in the low education category - with the exception of Norway (Table 4). Among other reasons, this can be attributed to the interviewees who are either housewives or retired and possess only middle or low academic certification.

It has already been mentioned that the representatives in the non-working group tend to be older. However, a division by school education clearly indicates that these differences can be larger or smaller with regard to the education group. It can be deduced from the means that the groups with higher levels of education - both in working and non-working sample - differ only slightly among the countries Austria, Germany, Italy, Norway and The Netherlands. This also applies to the middle education groups in Norway. Improvements in education over the last 20 years explain the levelling of the age differences in the high education group. In this case the characteristics age and education are confounded. Apart from this, it can be observed that especially the non-working group displays higher age differences in the education groups than is the case with the working group.

In addition to the general difference in the gender proportion in both working and non-working groups (Table 2), no considerable deviations in differences in education appear. Exceptions are to be found among the non-working groups in Austria and Germany where females are underrepresented at higher education levels.

Table 3: Working group: Distribution of age and gender within the education groups and their proportions.

Group	Age			Gender		Proportions	
	Mean	SD	Median	Male	Female	N	%
A-low	36.42	13.11	36	61.6%	38.4%	552	64%
A-middle	34.99	10.44	35	45.1%	54.9%	184	21%
A-high	37.67	11.68	36	61.7%	38.3%	133	15%
D-low	41.07	12.09	42	63.7%	36.3%	317	49%
D-middle	34.33	10.65	32	49.1%	50.9%	216	34%
D-high	39.26	11.39	37	65.1%	34.9%	109	17%
GB-low	46.05	10.29	47	50.0%	50.0%	206	29%
GB-middle	35.34	11.47	35	47.5%	52.5%	223	31%
GB-high	38.23	10.75	38	65.3%	34.7%	288	40%
H-low	42.39	11.06	46	51.3%	48.7%	152	26%
H-middle	34.96	10.62	35	64.4%	35.6%	191	33%
H-high	35.93	9.77	36	46.9%	53.1%	243	41%
I-low	48.87	8.32	49	62.4%	37.6%	85	15%
I-middle	36.49	11.80	35	65.5%	34.5%	174	30%
I-high	37.29	10.99	36	58.0%	42.0%	324	55%
IRL-low	45.44	13.92	47	72.5%	27.5%	120	25%
IRL-middle	35.94	11.01	34	73.4%	26.6%	109	23%
IRL-high	35.45	12.80	34	56.9%	43.1%	248	52%
N-low	44.34	13.36	45	53.2%	46.8%	173	16%
N-middle	38.25	12.88	36	55.1%	44.9%	664	60%
N-high	40.18	10.25	39	56.2%	43.8%	265	24%
NIRL-low	45.21	12.61	47	64.5%	35.5%	107	31%
NIRL-middle	33.97	10.65	33	56.1%	43.9%	114	34%
NIRL-high	37.13	10.35	35	58.5%	41.5%	118	35%
NL-low	37.42	11.49	38	77.4%	22.6%	230	34%
NL-middle	35.47	10.84	34	62.7%	37.3%	236	34%
NL-high	34.61	9.88	33	61.0%	39.0%	218	32%

Legend: A=Austria, D=Germany, GB=Great Britain, H=Hungary, I=Italy, IRL=Ireland, N=Norway, NIRL=Northern Ireland, NL=The Netherlands.

Table 4: Non-working group: Distribution of age and gender within the education groups and their proportions.

Group	Age			Gender		Proportions	
	Mean	SD	Median	Male	Female	N	%
A-low	54.11	20.12	60	31.8%	68.2%	834	75%
A-middle	52.42	18.67	56	33.3%	66.7%	144	13%
A-high	43.82	21.94	34	51.2%	48.8%	127	12%
D-low	59.62	15.82	64	32.4%	67.6%	577	67%
D-middle	50.56	17.95	52	31.8%	68.2%	151	17%
D-high	43.06	21.37	33	49.6%	50.4%	139	16%
GB-low	58.69	16.73	65	34.1%	65.9%	287	51%
GB-middle	48.74	20.66	49	32.0%	68.0%	128	22%
GB-high	47.23	21.12	47	38.8%	61.2%	152	27%
H-low	59.43	14.81	63	26.6%	73.4%	233	62%
H-middle	53.53	17.46	61	46.8%	53.2%	62	16%
H-high	44.94	19.47	47	38.1%	61.9%	84	22%
I-low	58.57	10.40	60	25.6%	74.4%	176	39%
I-middle	41.97	17.61	40	29.8%	70.2%	114	26%
I-high	39.08	19.20	33	35.5%	64.5%	155	34%
IRL-low	54.27	18.52	56	37.3%	62.7%	314	64%
IRL-middle	43.53	15.83	41	25.0%	75.0%	80	16%
IRL-high	42.46	17.40	41	13.9%	86.1%	101	20%
N-low	45.48	22.49	54	45.7%	54.3%	243	41%
N-middle	40.62	19.60	35	40.4%	59.6%	292	50%
N-high	45.80	20.10	43	48.0%	52.0%	50	9%
NIRL-low	57.25	17.76	61	32.3%	67.7%	291	66%
NIRL-middle	40.09	18.76	33	31.3%	68.8%	80	18%
NIRL-high	47.14	20.62	48	31.3%	68.7%	67	15%
NL-low	52.35	17.56	55	26.4%	73.6%	451	46%
NL-middle	44.24	18.10	42	28.3%	71.7%	279	28%
NL-high	36.89	18.93	31	40.3%	59.7%	258	26%

Legend: A=Austria, D=Germany, GB=Great Britain, H=Hungary, I=Italy, IRL=Ireland, N=Norway, NIRL=Northern Ireland, NL=The Netherlands.

## 7 Ranking of the importance of work values

The calculation of ranks in the individual work values was conducted using the means of the responses within each education group. A preliminary orientation for the comparison of the working and non-working groups can be obtained by comparing the responses for all participants in both samples (Table 5 and 6). The attribute *job security* (V24) ranks first and *interesting job* (V28) second. Third place among the working group is taken by *high income* (V25) and among the non-working group by *advancement* (V26).

This table shows prominent positions taken by both extrinsic-instrumental and intrinsic characteristics, thus indicating the comparatively small importance attached to an extrinsic-hedonistic orientation represented by the last places for V27 *a lot of leisure time* and V32 *flexible working hours*. Social orientation is considered more important among the non-working group, clearly indicated by that group's ranking fourth item V31 *useful to society*. The working group relegated this item to sixth place.

Observing the individual education groups, it becomes evident that the ranking of work values for the two samples (working and non-working group) can only provide rough clues. With regard to the first three places awarded, 13 education groups show a consensus in the preferences for professional attributes among both groups: in Austria, Great Britain, Hungary, Norway and Northern Ireland consensus exists among two education groups and in Germany, Italy and Northern Ireland this applies to one education group each. There is, however, no recognisable system with regard to one of the three education levels (low, average, high). *This suggests that employment does not generally engender other preferences.*

The stronger influence - with regard to employment - exerted by education on the work values becomes evident when the preferences of the education groups are compared with one another. *Job security* (V24) assumes first place in all lower education groups. A similar effect independent of the attribute employment can be observed among the higher educated groups. In seven countries the characteristic *interesting job* (V28) takes first place among both the working and non-working groups.

Of course no statement about systematic interrelations can be made by merely looking at which items take first place. They do indicate, however, that no great differences can be expected between both samples. This is particularly noteworthy when the constitution of participants in both sections of the survey is considered (see Section 3). The multivariate analysis will clearly indicate in which way there is a consensus of preferences among the education groups and which similarities exist between the working and non-working group.

Table 5: Working group: Ranking of importance of work values in the 27 groups.

Group	V24	V25	V26	V27	V28	V29	V30	V31	V32	N
A-low	1	5	4	8	2	3	6	7	9	552
A-middle	3	5	4	9	1	2	6	7	8	184
A-high	3	7	4	9	1	2	5	6	8	133
D-low	1	4	5	6	2	3	8	7	9	317
D-middle	1	4	5	6	2	3	8	7	9	216
D-high	3	5	4	9	1	2	8	6	7	109
GB-low	1	3	4	9	2	5	6	7	8	206
GB-middle	1	4	3	8	2	5	6	7	9	223
GB-high	2	4	3	8	1	5	7	6	9	288
H-low	1	2	7	6	5	9	4	3	8	152
H-middle	1	2	9	7	4	8	6	3	5	191
H-high	1	2	9	6	3	5	7	4	8	243
I-low	1	3	7	9	2	6	5	4	8	85
I-middle	1	4	5	9	2	3	7	6	8	174
I-high	2	4	6	9	1	5	7	3	8	324
IRL-low	1	3	4	8	2	5	7	6	8	120
IRL-middle	1	3	4	9	2	5	7	6	8	109
IRL-high	2	4	3	9	1	5	6	7	8	248
N-low	1	5	7	8	2	3	6	4	9	173
N-middle	1	4	7	9	2	3	6	5	8	664
N-high	2	5	7	9	1	3	6	4	8	265
NIRL-low	1	3	2	9	4	7	6	5	8	107
NIRL-middle	1	4	3	9	2	7	6	5	8	114
NIRL-high	1	5	3	8	2	7	6	4	9	118
NL-low	1	6	4	8	3	2	5	7	9	230
NL-middle	3	7	4	8	1	2	5	6	9	236
NL-high	4	7	3	9	1	2	5	6	8	218
Total	1	3	5	8	2	4	7	6	8	5999

Legend: A=Austria, D=Germany, GB=Great Britain, H=Hungary, I=Italy, IRL=Ireland, N=Norway, NIRL=Northern Ireland, NL=The Netherlands .

Table 6: Non-working group: Ranking of importance of work values in the 27 groups.

Group	V24	V25	V26	V27	V28	V29	V30	V31	V32	N
A-low	1	5	4	9	2	3	6	7	8	834
A-middle	2	7	4	9	1	3	6	5	8	144
A-high	3	8	4	9	1	2	6	5	7	127
D-low	1	3	5	8	2	4	7	6	9	577
D-middle	2	4	5	8	1	3	7	6	9	151
D-high	3	7	4	8	1	2	6	5	9	139
GB-low	1	4	3	9	2	7	6	5	8	287
GB-middle	1	4	3	9	2	7	6	5	8	128
GB-high	2	6	3	9	1	7	5	4	8	152
H-low	1	2	4	7	5	8	6	3	9	233
H-middle	1	2	7	8	4	6	5	3	9	62
H-high	1	3	6	8	2	5	7	4	9	84
I-low	1	3	5	9	2	7	6	4	8	176
I-middle	1	6	3	9	2	7	4	5	8	114
I-high	2	5	3	9	1	8	6	4	7	155
IRL-low	1	4	3	9	2	7	5	6	8	314
IRL-middle	1	4	3	9	2	7	6	5	8	80
IRL-high	2	6	3	9	1	7	5	4	8	101
N-low	1	6	7	8	2	4	5	3	9	243
N-middle	1	5	7	9	2	3	4	6	8	292
N-high	2	6	7	9	1	3	5	4	8	50
NIRL-low	1	4	3	9	2	7	6	5	8	291
NIRL-middle	1	4	3	9	2	7	6	5	8	80
NIRL-high	1	5	3	9	2	7	6	4	8	67
NL-low	1	7	3	9	2	5	4	6	8	451
NL-middle	2	7	3	9	1	4	6	5	8	279
NL-high	4	7	3	9	1	2	5	6	8	258
Total	1	5	3	9	2	6	7	4	8	5869

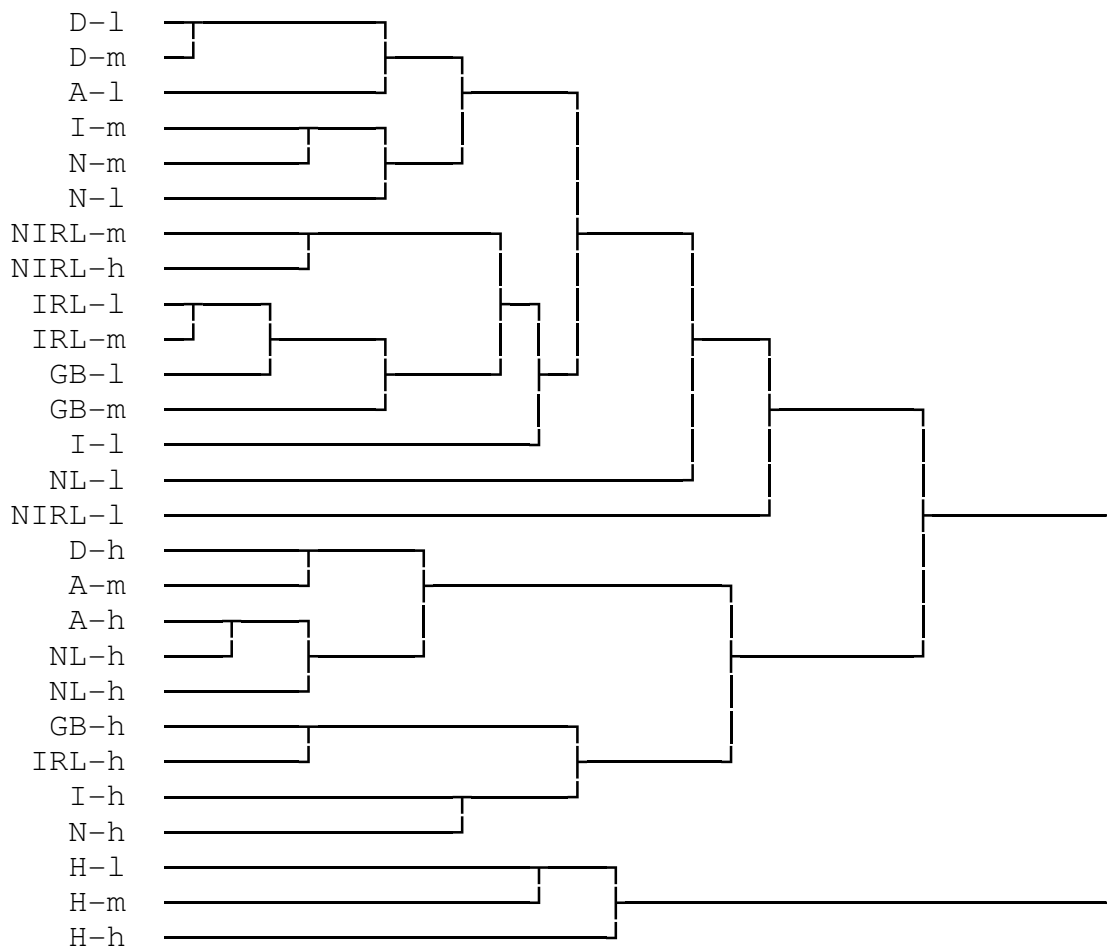
Legend: A=Austria, D=Germany, GB=Great Britain, H=Hungary, I=Italy, IRL=Ireland, N=Norway, NIRL=Northern Ireland, NL=The Netherlands.

## 8 Results of the cluster analyses

### 8.1 The working group

The cluster analysis conducted using the average linkage procedure for the working group produces the grouping sequence presented in the dendrogram (Figure 1). The decision where to draw the line for the distance function was based on the difference of the distance function of two consecutive merging levels expressing to what degree the homogeneity of the resulting clusters is markedly reduced.

Figure 1: Cluster analysis of the working group.



Legend: First, the country is given, then the education category within that country. A=Austria, D=Germany, GB=Great Britain, H=Hungary, I=Italy, IRL=Ireland, N=Norway, NIRL=Northern Ireland, NL=The Netherlands. The education categories are: l=low education, m=middle education, h=high education.

As a result, six clusters can be distinguished, though one very large cluster with 13 groups consisting of two clear subclusters also emerges. Its inner structure can be compared with that of the other clusters. A division of this large cluster seems quite natural, producing seven distinguishable clusters in all. Characteristic for this arrangement is the fact that the groups of a cluster all have the same element occupying the first two places in the preference hierarchy of employment attributes. If the



hierarchy of the clusters is observed using the dendrogram, there is a union at the highest level connecting the clusters of Hungary's three education groups with all the other groupings. Hungary obviously has a special structure of work values deviating markedly from all the other countries. On the next level, a union of clusters occurs which, on the one hand, comprises groups with middle and high education and on the other hand - with one exception - groups with middle and low education. This obviously indicates an education effect. The next level indicates national effects as individual nations with their education groups become visible within the low and middle education cluster and the middle and high education cluster.

Table 7: Working group: Ranking of work values in the clusters.

	A-l D-l D-m I-m N-l N-m	GB-l GB-m I-l IRL-l IRL-m NIRL-m NIRL-h	NL-l	NIRL-l	A-m A-h D-h NL-m NL-h	GB-h I-h IRL-h N-h	H-l H-m H-h
<i>Work values</i>							
V24 Job security	1	1	1	1	3	2	1
V25 High income	4	3	6	3	6	3	2
V26 Advancement	5	4	4	2	4	5	9
V27 A lot of leisure time	8	9	8	9	8	9	6
V28 Interesting job	2	2	3	4	1	1	4
V29 Work independently	3	6	2	7	2	4	8
V30 Help other people	7	7	5	6	5	7	5
V31 Useful to society	6	5	7	5	6	6	3
V32 Flexible working hours	9	8	9	8	9	8	7

Legend: A=Austria, D=Germany, GB=Great Britain, H=Hungary, I=Italy, IRL=Ireland, N=Norway, NIRL=Northern Ireland, NL=The Netherlands. The education categories are: l=low education, m=middle education, h=high education.

The seven clusters can be best described using the ranking order of the items computed for each cluster (Table 7). The two clusters just described as having very similar structures (clusters 1 and 2) have an identical ranking order in the first and second position. *Job security* (V24) occupies first place and *interesting job* (V28) second. Third place shows different results, however. Cluster 1 ranked third *work independently* (V29) and cluster 2 *high income* (V25). Since in both clusters only low and middle education groups (with the exception of Northern Ireland) from different countries are represented (with the exception of Italy) and the connection between the countries prevails at the lowest level, the difference can be considered an effect of nationality. The countries Austria (l), Germany (l, m), Italy (m) and Norway (l, m) are in cluster 1 and Great Britain (l, m), Ireland (l, m), Northern Ireland (m, h) are in cluster 2. Italy (l) is also in cluster 2 having been assigned to it later. If the

items are considered indicators of work orientation, then both clusters are characterised by extrinsic and intrinsic value orientations, whereby the latter aspect is more evident in cluster 1.

Clusters 3 and 4 are formed by one individual education group each. In cluster 3, The Netherlands (l) ranked *job security* (V24) first in the preference hierarchy, second and third places are taken respectively by *work independently* (V29) and *interesting job* (V28). An aspect of extrinsic orientation thus is followed by the indicators of intrinsic value orientation. In contrast, in cluster 4, Northern Ireland (l) is characterised by the three indicators of extrinsic work values.

The preference hierarchy in cluster 5 has the professional attribute *interesting job* (V28) in first, *work independently* (V29) in second and *job security* (V24) in third place. This cluster includes the countries Germany (h), Austria (m, h) and The Netherlands (m, h). An intrinsic value orientation clearly is at the forefront in this cluster.

Cluster 6 contains the high education groups of Great Britain, Italy, Ireland and Norway. Here first place is taken by *interesting job* (V28), second and third by *job security* (V24) and *high income* (V25) respectively. Thus the indicators for intrinsic and extrinsic orientation are at the forefront for these countries.

Hungary's special position as compared to the other countries considered here is highlighted in the summary of its three education groups in cluster 7. Next to the employment attributes *job security* (V24) and *high income* (V25), which occupy up first and second place respectively, the appearance of the attribute *useful to society* (V31) in third place is important. The degree to which the assumption can be justified that this ranking is due to Hungary's special political and economic system can be „verified“ using the results of the non-working group.

The determination of the dissimilarity matrix and the ensuing cluster analysis were repeated with a subsample of randomly selected interviewees in order to prevent coincidental influences from altering the results. This subsample was made by randomly drawing 50 per cent of the original cases out of each of the 27 groups. An analysis of this subsample produced nearly identical cluster configurations with just one exception. It can therefore be concluded that the result can be applied in general above and beyond a coincidental variation of persons questioned in the survey.

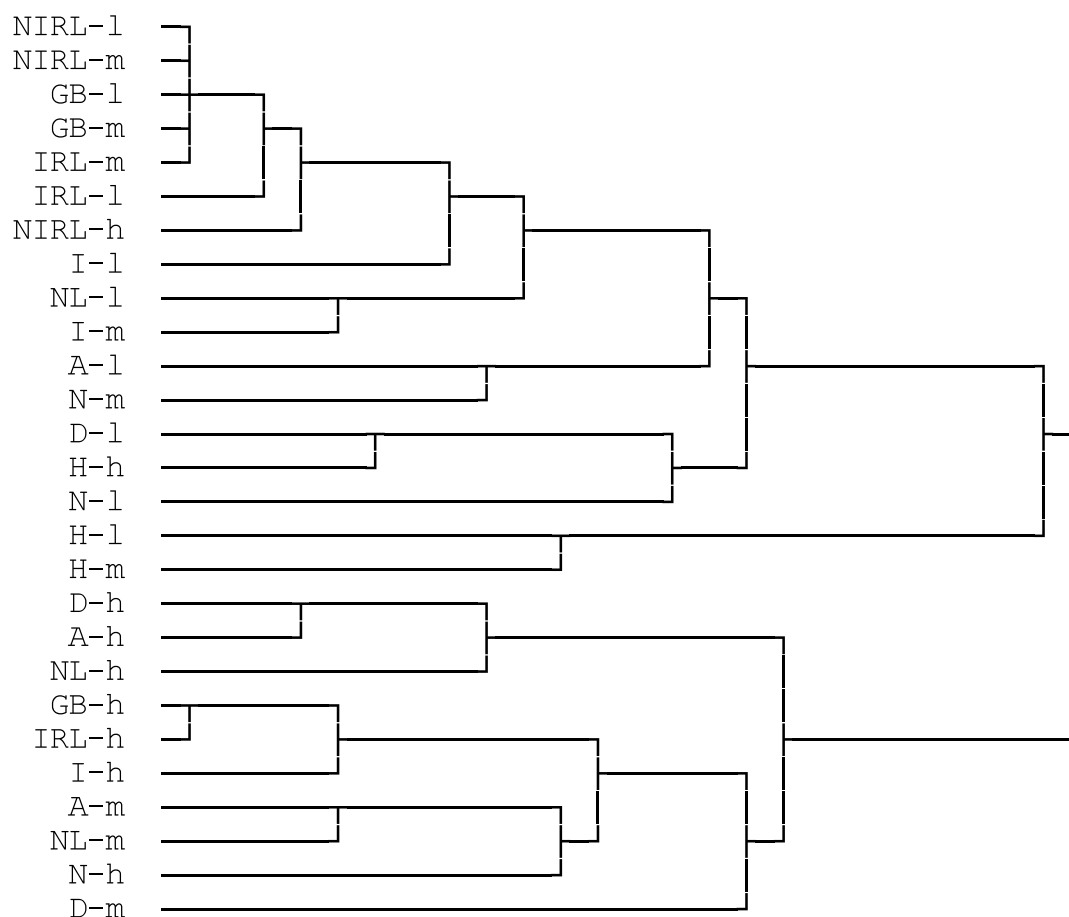
On the whole, the result of the cluster analysis points to differences between the education groups with regard to the predominant orientation. The individual clusters can be put into order according to their prevailing preferences if the extrinsic and intrinsic work values are considered two poles of a continuum. This order corresponds to the predominantly extrinsic aspect of the clusters comprised of countries with middle and low education groups. Intrinsic aspects are important in the clusters where middle and high education groups are combined.

## 8.2 The non-working group

A cluster analysis in accordance with the average linkage procedure based on the dissimilarity matrix of the 27 education groups has also been calculated with regard to the non-working group. The grouping order can be seen in Figure 2. The process of the union, as becomes evident in the dendrogram, shows that - in contrast to the sample of the working group - clusters with heterogeneous structure appear in the early stages of the combination of groups. Seven clusters can be identified if one

takes a level of the distance function that is approximately comparable to the sample of the currently employed interviewees as an indicator for the number of clusters. Four clusters are produced if the consensus in the first two positions on the preference hierarchy of the individual groups is considered. This number of clusters was chosen because of the improved comparison of the two samples (working and non-working group). The clusters in the entire similarity structure are much more heterogeneous than is the case with the clusters of the working group.

Figure 2: Cluster analysis of the non-working group.



Legend: First, the country is given, then education category within that country: A=Austria, D=Germany, GB=Great Britain, H=Hungary, I=Italy, IRL=Ireland, N=Nor way, NIRL=Northern Ireland, NL=The Netherlands. The education categories are: l=low education, m=middle education, h=high education.

Cluster 1 as the largest cluster unifies 15 of the 27 education groups. Characteristic for this cluster is the employment attribute *job security* (V24) in first place and *interesting job* (V28) in second. *Advancement* (V26) takes third place in the preference hierarchy. The cluster includes low and middle education groups, with the exception of Hungary and Northern Ireland. Looking at the cluster's inner structure by using the dendrogram (Figure 2), a homogeneous subgroup can be identified consisting of the countries Great Britain, Ireland and Northern Ireland. When combined with Italy (m, l) and The Netherlands (l) it forms only a slightly heterogeneous subcluster. This union is at least comparable, with respect to the distance function, to a second sub-

cluster consisting of Austria (l) and Norway (m). The third subcluster of cluster 1 - consisting of Germany (l), Hungary (h) and Norway (l) - is somewhat more heterogeneous. It is thus evident that the structure in cluster 1 is further defined by the kind of education groups and even further differentiated by national effects.

Table 8: Non-working group: Ranking of work values in the clusters.

	A-l, D-l GB-l, GB-m, H-h, I-l, I-m IRL-l IRL-m,N-l N-m, NIRL-l NIRL-m NIRL-h, NL-l	H-l H-m	A-h D-h NL-h	A-m D-m GB-h I-h IRL-h N-h NL-m
<i>Work Values</i>				
V24 Job security	1	1	3	2
V25 High income	4	2	7	7
V26 Advancement	3	5	4	3
V27 A lot of leisure time	9	8	9	9
V28 Interesting job	2	4	1	1
V29 Work independently	7	7	2	5
V30 Help other people	6	5	6	6
V31 Useful to society	5	3	5	4
V32 Flexible working hours	8	9	8	8

Legend: Austria, D=Germany, GB=Great Britain, H=Hungary, I=Italy, IRL=Ireland, N=Norway, NIRL=Northern Ireland, NL=The Netherlands. The education categories are: l=low education, m=middle education, h=high education .

The low and middle education group of Hungary make up cluster 2. It is characterised by two extrinsic employment attributes taking up the first two positions of the ranking. *Job security* (V24) and *high income* (V25) are characteristic for this cluster. *Useful to society* (V31) occupies the third position.

The high education groups of Austria, Germany and The Netherlands comprise cluster 3. The two intrinsic employment attributes *interesting job* (V28) and *work independently* (V29) occupying first and second place respectively, mark this cluster. *Job security* (V24) only comes in third place. This cluster is clearly characterised by an intrinsic work orientation.

Cluster 4 consists of seven middle and high education groups. The middle education groups are represented by Austria, Germany and The Netherlands, the high education groups by Great Britain, Italy, Ireland and Norway. The first position in the preference hierarchy is occupied by *interesting job* (V28) followed by *job security* (V24). *Advancement* (V26) takes up the third rank. This cluster is characterised by both an intrinsic and an extrinsic orientation.

Regarding the sample of non-working interviewees it can be said that the clusters with exclusively middle and high education groups - clusters 3 and 4 - are clearly different from all the others because they have an intrinsic characteristic at the top of

their preference hierarchy. The third cluster containing high education groups only underlines with its two intrinsic attributes the importance this orientation has for the higher educated interviewees.

## 9 Interpretation of the classification

In the following section, the preferences of work values will be connected with the variables of criteria using the results of both cluster analyses. In addition to the interviewees' employment and school education (the influence of which remains to be systematically summarised) individual characteristics like age and gender will be taken into consideration. Data on the structure of the country like gross domestic product (GDP), purchasing power parity and unemployment rates will serve as collective characteristics.

An interpretation of both cluster compositions with regard to theoretical dimensions of work values will be conducted using the first three positions occupied in a cluster. Each item will be considered an indicator for the work value dimensions. Since both extrinsic as well as intrinsic orientations weigh most heavily in almost all clusters, it is feasible and makes sense to plot them on a continuum of extrinsic (E) to intrinsic (I) values as depicted in Table 9.

### *Employment*

Previous results have shown that the question about whether a person is active in a profession or not does not strongly influence the judgement of work values. A comparison of the dendrograms (Figure 1 and 2) providing information about the unifying of groups of clusters shows that the clusters of the non-working group have less internal similarity than the clusters of the working group. Four clusters were sufficient to establish separate groups based on the criterion that each cluster has identical rankings for the first two positions. Seven clusters, however, were necessary with the interviewees active in a profession. With regard to work values, the fact that the third rank position was subject to little variation in the cluster with the most groups is a sign of homogeneity in the non-working group.

It can be deduced from Table 9 that, on the whole, the non-working interviewees attach more importance to the extrinsic work values (*job security, high income, advancement*) as compared to the intrinsic values (*work independently, interesting job*) than is the case with the currently employed interviewees. This is underlined by the fact that in the non-working group two intrinsic attributes (EII, IIE) only appear once.

Table 9: Cluster plotting on a continuum from extrinsic to intrinsic orientation (average age in brackets), age and gender in the clusters.

Working group						
EEE	EES	EIE	EII	EII	IEE	IIE
NIRL-l (45)	H-l (42) H-m (35) H-h (38)	GB-l (46) GB-m (35) I-l (49) IRL-l (45) IRL-m (36) NIRL-m (34) NIRL-h (37)	A-l (36) D-l (41) D-m (34) I-m (36) N-l (44) N-m (38)	NL-l (37)	GB-h (38) I-h (37) IRL-h (35) N-h (40)	A-m (35) A-h (38) D-h (39) NL-m (35) NL-h (35)
Average age in the cluster						
45.21	37.76	40.39	38.48	37.42	37.79	36.40
Gender (M=Male, F=Female)						
64.5% (M) 35.5% (F)	54.2% (M) 46.8% (F)	60.1% (M) 39.9% (F)	58.0% (M) 42.0% (F)	77.4% (M) 22.6% (F)	59.1% (M) 40.9% (F)	59.1% (M) 40.9% (F)
Non-working group						
	EES	EIE			IEE	IIE
	H-l (59) H-m (54)	A-l (54) D-l (60) GB-l (59) GB-m (49) H-h (45) I-l (59) I-m (42) IRL-l (54) IRL-m (44) N-l (45) N-m (41) NIRL-l (57) NIRL-m (40) NIRL-h (47) NL-l (52)			A-m (52) D-m (51) GB-h (47) I-h (39) IRL-h (42) N-h (46) NL-m (44)	A-h (44) D-h (43) NL-h (37)
Average age in the cluster						
	56.48	49.82			45.97	41.26
Gender (M=Male, F=Female)						
	36.69% (M) 63.31% (F)	32.90% (M) 67.10% (F)			32.80% (M) 67.20% (F)	47.04% (M) 52.96% (F)

Legend: A=Austria, D=Germany, GB=Great Britain, H=Hungary, I=Italy, IRL=Ireland, N=Norway, NIRL=Northern Ireland, NL=The Netherlands. The education categories are: l=low education, m=middle education, h=high education, E=extrinsic, I=intrinsic, S=social.

### *School education and nationality*

The arrangement of the education groups according to the continuum of orientation in Table 9 clearly indicates that school education exerts a stronger influence on the preference hierarchy of work values than the employment taken. If one looks only at the clusters of both samples with an intrinsic attribute occupying first place in the preference hierarchy - the rankings IEE and IIE - it becomes apparent that almost all groups with high education are represented. Only the high education groups in Hungary and Northern Ireland cannot be placed in the intrinsic clusters as they considered *job security* to be most important. This different weighing of employment attributes is confirmed in both analyses and can certainly be explained by their special political and economic situation. The fact that five groups with middle education can be found along with high education groups in the intrinsic orientation cluster can be attributed to the effect of nationality.

In addition, the groupings demonstrate that a division of education groups in a country can be made more or less readily. In the English speaking countries (Great Britain, Ireland and Northern Ireland) it is striking that the low and middle education groups do not differ in their orientations among the working and non-working groups. Here, differences in education levels do not seem to have any recognisable effect.

Furthermore, differences become evident between the English speaking countries (Great Britain, Ireland and Northern Ireland) and the other European countries and Hungary. The interviewees in Hungary differ from all the others in their high assessment of both extrinsic and social oriented values. The English speaking groups with low and middle education - in the case of Northern Ireland also the high education group - turn up in a cluster with a generally more extrinsic orientation (EIE). An additional subgroup within the Western European countries could be said to appear, in so far as the German speaking nations (Austria and Germany) and The Netherlands show the highest level of intrinsic orientation. There appears to be an effect of cultural membership where the development of common values within common language areas could be of importance.

### *Age and gender*

Variations in importance of work values created by the education variable may also be partially caused by the average age in the individual education groups. Only negligible differences exist in the average age within the seven clusters of the working group (Table 9). Disregarding the clearly extrinsic oriented cluster (EEE), the age span of the remaining cluster average values ranges between 36.4 and 40.4 years. This small range and the dispersion of the average age values within the cluster itself do not indicate any clear trend.

A somewhat different finding emerges from the results of the non-working group. Here is a recognisably negative connection between an orientation that tends to be more intrinsic and the average age. That is to say, the more intrinsic a cluster is, the younger on average the members of that cluster are. In this case the overlapping of the two characteristics age and education is much more obvious. The middle education groups of Germany and Austria do not fit into this pattern. With their average values of 51 to 52 years they are among the oldest but, nevertheless, have a more intrinsic orientation.

The gender proportions in the clusters do not allow to recognise a trend in any specific direction. There is a nearly equal distribution of males and females in the intrinsic oriented cluster 3 (D-h, A-h, and NL-h) of non-working interviewees, i.e. males are in the slight majority in this cluster. An explanation may lie in the levelling of differences in gender representation through higher education.

#### *Country structure data*

Table 10 shows some selected data on the economic structures for the year 1989 in the countries examined. It can be seen that the highest GDP per capita is achieved in Norway (\$21,341) and Germany (\$19,182) and is on similar levels (from \$14,642 to \$16,603) in Austria, Italy, The Netherlands, and Great Britain (including Northern Ireland). Only Ireland with \$9,644 and especially Hungary with \$2,750 GDP per capita have significantly lower GDP figures. Haller and Heschl (1993) arrive at an equivalent division based on GNP. Striking differences between the countries appear in other structure data as well. In 1989 the unemployment rate in Ireland was 14.7%, the highest in all the countries examined. The figures on unemployment in Hungary (0.4%) are nearly of no account. At the time of the survey the formerly socialist country had just begun its transformation process and the 1989 figure can be attributed to the state's artificial full employment policies.

Hungary is the only country showing any relationship between structure data and the preference hierarchy. Explanations provided by Häder & Häder (1995) in their analysis of work values in East and West Germany from 1990 to 1992 can be applied to the situation in Hungary. Comparatively high levels of importance were attached to extrinsic and social values in East Germany. In view of the transformation process in the Eastern European countries, work orientations in Hungary have a much stronger tendency than in the West to emphasise maintaining the present standard of living and preventing a decline of social values. This is confirmed in the importance attached to job security and high income. According to Häder & Häder (1995), the comparatively high ranking of the work value V31 *job useful to society* (third place) can be attributed to a sense in those countries that special efforts in the profession are considered a remedy for the present economic and social crisis.



Table 10: Country structure data: Population, occupation, GDP, purchasing power parity and unemployment rate.

..... Units	A	D <sup>5</sup>	GB NIRL	H <sup>6</sup>	I	IRL	N	NL
<i>Population</i> <sup>1</sup>								
Total ..... Thousands	7624	61990	57236	10552	57525	3515	4227	14849
<i>Employment</i> <sup>1</sup>								
Total civilian employment <sup>2</sup> ..... Thousands	3342	27208	26457	*	20833	1077	2014	6065
Of which: Agriculture ..... %	8,0	3,7	2,1	20,0	9,3	15,1	6,6	4,7
Industry ..... %	37,0	39,8	29,4	37,4	32,4	28,4	25,3	26,5
Services ..... %	55,1	56,5	68,4	41,6	58,2	56,5	68,1	68,8
<i>Gross domestic product (GDP)</i> <sup>1</sup>								
At current prices and current exchange rates ..... Bill US \$	126,5	1189,1	837,5	27,1	865,8	33,9	90,2	223,7
Per capita ..... US \$	16603	19182	14642	2750	15051	9644	21341	15063
<i>Private consumption per capita using current purchasing power parities</i> <sup>1</sup>								
..... US \$	7434	8120	9154	*	8577	5079	8224	8133
<i>Standardised unemployment rates</i> <sup>3</sup> (per cent of total labour forces)								
..... 1988	5,4 <sup>4</sup>	6,2	8,6	*	11,0	16,2	3,2	9,1
..... 1989	5,0 <sup>4</sup>	5,6	7,2	0,4	10,9	14,7	4,9	8,3
..... 1990	5,4 <sup>4</sup>	4,8	7,0	1,7	10,3	13,3	5,2	7,5

<sup>1</sup> OECD Basics Statistics: International Comparisons (August 1991) for reference period 1989 (Annex of OECD Economic Surveys Austria 1991/1992).

<sup>2</sup> According to the definitions used in OECD Labour Force Statistics.

<sup>3</sup> OECD Wirtschaftsausblick 1994, Annex Table 21: Standardised unemployment rates.

<sup>4</sup> OECD Economic Surveys Austria 1991/1992.

<sup>5</sup> Data for West Germany.

<sup>6</sup> OECD Economic Surveys Hungary 1991.

\* Not available.

## 10 Concluding remarks

The analyses conducted here show, as expected, the strong effect school education has on the construction of work orientation. It confirms that the importance of school education pointed out by various German authors also applies to other European countries. Hungary is the only exception. The political, social and economic situation there outweighs the education effect in that country. The education effect manifests itself in the disproportionately higher level of importance attached to intrinsic work values (interesting job, work independently) by those with high education than is the case for the other education groups. The lower education groups emphasise extrinsic values (job security, high income). The uniformity of the value orientations shown in the survey, irrespective of the kind of academic certification obtained, is remarkable

especially when the diversity of the school and education systems in these countries is considered.

It cannot be deduced from the separately conducted analysis of the working and the non-working group that the employment exerts a clear influence on the work values. The somewhat higher evaluation of extrinsic work values given by the non-working group could be partially attributed to the higher portion of older interviewees in this group. The results presented here are in harmony with previously published investigations on changes in values (Inglehart 1977, Klages 1984, 1992) that an increase of better educated person coincides with a higher importance of post-materialistic and self-realisation values in a society.

#### *Notes*

1. The data have been assembled, documented (ZA-Archive number 1840: ISSP 1989 Work Orientations) and made accessible from the Zentralarchiv für Empirische Sozialforschung an der Universität zu Köln.